

|                                |          |             |           |
|--------------------------------|----------|-------------|-----------|
| <b>TRANSMITTAL SLIP</b>        |          | <b>DATE</b> | 28 Mar 83 |
| <b>TO:</b> William Martin, NSC |          |             |           |
| ROOM NO.                       | BUILDING |             |           |
| 372-A                          | Old EOB  |             |           |

|                               |             |             |           |
|-------------------------------|-------------|-------------|-----------|
| <b>TRANSMITTAL SLIP</b>       |             | <b>DATE</b> | 28 Mar 83 |
| <b>TO:</b> L. Paul Bremer III |             |             |           |
| ROOM NO.                      | BUILDING    |             |           |
| 7224                          | State Dept. |             |           |

|  |          |             |           |
|--|----------|-------------|-----------|
| <b>TRANSMITTAL SLIP</b>                  |          | <b>DATE</b> | 28 Mar 83 |
| <b>TO:</b> David Platt, O/Vice President |          |             |           |
| ROOM NO.                                 | BUILDING |             |           |
| 280                                      | Old EOB  |             |           |

|  |          |             |           |
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| <b>TRANSMITTAL SLIP</b>                      |          | <b>DATE</b> | 28 Mar 83 |
| <b>TO:</b> Danny Boggs, O/Policy Development |          |             |           |
| ROOM NO.                                     | BUILDING |             |           |
| 227  | Old EOB  |             |           |

|                             |           |             |           |
|-----------------------------|-----------|-------------|-----------|
| <b>TRANSMITTAL SLIP</b>     |           | <b>DATE</b> | 28 Mar 83 |
| <b>TO:</b> Earl Gjelde, DOE |           |             |           |
| ROOM NO.                    | BUILDING  |             |           |
| 7B260                       | Forrestal |             |           |
| <b>REMARKS:</b>             |           |             |           |

FYI

cc: Oil Price Group Participants

|  |          |           |  |
|--|----------|-----------|--|
| <b>FROM:</b> Harry Rowen, Chairman/NIC |          |           |  |
| ROOM NO.                               | BUILDING | EXTENSION |  |
| 7E62                                   | Hqs./CIA |           |  |

FORM NO. 241  
1 FEB 55  
REPLACES FORM 36-8  
WHICH MAY BE USED.

|                                 |          |             |           |
|---------------------------------|----------|-------------|-----------|
| <b>TRANSMITTAL SLIP</b>         |          | <b>DATE</b> | 28 Mar 83 |
| <b>TO:</b> Lawrence Kudlow, OMB |          |             |           |
| ROOM NO.                        | BUILDING |             |           |
| 244                             | Old EOB  |             |           |

|                                  |          |             |           |
|----------------------------------|----------|-------------|-----------|
| <b>TRANSMITTAL SLIP</b>          |          | <b>DATE</b> | 28 Mar 83 |
| <b>TO:</b> Martin Feldstein, CEA |          |             |           |
| ROOM NO.                         | BUILDING |             |           |
| 314                              | Old EOB  |             |           |
| <b>REMARKS:</b>                  |          |             |           |

FYI

cc: Oil Price Group Participants

|  |          |           |  |
|--|----------|-----------|--|
| <b>FROM:</b> Harry Rowen, Chairman/NIC |          |           |  |
| ROOM NO.                               | BUILDING | EXTENSION |  |
| 7E62                                   | Hqs./CIA |           |  |

FORM NO. 241  
1 FEB 55  
REPLACES FORM 36-8  
WHICH MAY BE USED.

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|                         |                 |             |
|-------------------------|-----------------|-------------|
| <b>TRANSMITTAL SLIP</b> |                 | <b>DATE</b> |
|                         |                 | 28 Mar 83   |
| <b>TO:</b>              |                 |             |
| NIO/E                   |                 |             |
| <b>ROOM NO.</b>         | <b>BUILDING</b> |             |
| 7E48                    |                 | hqs.        |

|                         |                 |             |
|-------------------------|-----------------|-------------|
| <b>TRANSMITTAL SLIP</b> |                 | <b>DATE</b> |
|                         |                 | 28 Mar 83   |
| <b>TO:</b>              |                 |             |
| [REDACTED], DD/OGI      |                 |             |
| <b>ROOM NO.</b>         | <b>BUILDING</b> |             |
| 3G00                    |                 | Hqs.        |

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| <b>TRANSMITTAL SLIP</b>                  |                 | <b>DATE</b>      |
|  |                 | 28 Mar 83        |
| <b>TO:</b>                               |                 |                  |
| Lou Pugliaresi                           |                 |                  |
| <b>ROOM NO.</b>                          | <b>BUILDING</b> |                  |
| 7C12                                     |                 | State Dept       |
| <b>REMARKS:</b>                          |                 |                  |
| S.                                       |                 |                  |
| FYI                                      |                 |                  |
| <b>FROM:</b>                             |                 |                  |
| Harry Rowen, Chairman/NIC                |                 |                  |
| <b>ROOM NO.</b>                          | <b>BUILDING</b> | <b>EXTENSION</b> |
| 7E62                                     | Hqs./CIA        | [REDACTED]       |
| <b>FORM NO.</b>                          | <b>241</b>      |                  |
| 1 FEB 55                                 |                 |                  |
| REPLACES FORM 36-8<br>WHICH MAY BE USED. |                 |                  |

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March 14, 1983

Mr. Henry Rowen  
Chairman  
National Intelligence Council  
Room 7E 48  
CIA Headquarters  
Washington, D.C. 20505

Dear Harry:

I'm writing to follow up on our recent conversation regarding the short- to intermediate-term outlook for world oil prices. Basically, our discussion revolved around how the analysis [redacted] over a year ago on this subject as part of the Pan Heuristics project on energy security should be updated to reflect current market trends and perceptions. I have enclosed a copy of the final report we did. I have also pulled out Figures 5-9 from that report and an additional figure I prepared for you last spring because I believe they are particularly relevant.

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Looking back on these analyses, there is not a great deal I would change. Economic growth has been a bit lower than we included in the low growth scenario. But most of the cyclical loss may be regained this year. Second, our inflation forecast (7 percent per year) has turned out to be 2 or 3 percent higher than now seems likely (this bias has been compounded because of the further strengthening of the dollar relative to other currencies). Finally, we did not anticipate that destocking would continue into 1983 (although we assumed there would be a lot of it during 1981-82).

Since the declining price portions of our summary figures were actually drawn dollar or two lower than our actual projections (to smooth out the curves), I would not be inclined to rerun any models and redraw the figures (actually I've done a bit of experimenting to verify this) because things would not change all that much. Given recent events, though, I would assign a higher probability to the price break scenario than I did last year. A break in the nominal price seems inevitable. Thus, the extra figure you requested last year may, in fact, turn out to be the most relevant one to look at. However, it's not yet obvious whether the market will be completely re-equilibrated in one jump or whether one or more smaller adjustments will occur. I still feel that the OPEC leadership attaches a greater loss of face to declines in the nominal price of oil than simple market analyses would indicate.

To summarize, I now feel that there are three equally important determinants of the extent of the world oil glut and the degree of the ensuing market tightening. 1) the rate of economic growth in the oil importing countries; 2) the level of production outside Saudi Arabia (with Iran, Iraq and Mexico as principle wild cards); and 3) the ability of the OPEC leadership to agree on a production allocation system that enables them to defend the nominal price. Given low economic growth (2.5% per annum in the OECD, 4% in the oil importing LDCs) and low non-Saudi supply (4.0 mmbd or so), the real price of oil could either decline at the rate of inflation until 1985-86, bottoming out at \$26/bbl (in 1981 dollars); or a price break could occur bringing it down to \$23-\$24/bbl by next year. As we discussed, it looks like about half of this break is inevitable in a matter of days or weeks, with about a 50-50 chance of the other half occurring before early in the fourth quarter of this year (when cyclical demand will start to pick up).

There are two critiques of this type of analysis that I believe have some merit (and about a dozen that don't), but I don't believe either alters the fundamental thrust of our conclusions. First, we assumed essentially a symmetric response to price changes. This is surely not a perfect description of what we can expect, but the real question is what we loose by making it. Arguments to the effect that the price response is unsymmetric and much smaller when prices decline are usually based on two arguments: (1) that price declines are perceived to be only temporary, and (2) that most energy use is tied to capital stock that turns over only slowly. To bound the bias a symmetric price response assumption might cause, consider the OECD tariff case shown in Figure 9, where it is assumed that any decline in the real price of oil below 34 1981 \$'s per barrel is offset by an equal and opposite OECD tariff. In our system this is equivalent to the assumption that consumers do not adjust to any price decline below \$34/bbl, i.e., the price elasticity is zero for price declines. Even in this extreme case the delay in the return of the \$34/bbl world oil price is only about five years, and absent the tariff, this is likely to significantly overstate the effect.

First, recent work [redacted] (actually based on more detailed sectoral modeling done by others) leads us to believe that as much as 30% of the price response is caused by changes in utilization rates as opposed to changes in the efficiency of the capital stock. Second, fuel switching capability is on the rise. I've heard that between 1/3 and 1/2 of the oil/gas burning electric generating capacity in the U.S. can now use either fuel and I suspect a similar trend is occurring in the industrial sector. Finally, U.S. motor gasoline, which accounts for a significant portion of WOCA oil demand, may already be turning around with last year's fuel efficiency goals fading from view and the public driving more at \$1.00/gallon than at \$1.25. These factors will not eliminate the nonsymmetry of the price response caused by expectations and slow capital stock turnover, but frankly given where we are now, I have more faith in it than in a perfect look-ahead assumption.

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Ironically, I believe that the expectations effect will become more significant after oil prices bottom out and have established a several-years-trend of healthy increases. In these circumstances it is the exporters who will be back in the drivers seat. Our projections have been criticized for reflecting price increases that are too rapid after they start increasing again (especially when they increase more rapidly than the rate of interest). Although I believe this is a difficult critique to make given the history of the world oil market, it too has merit, particularly in the longer term. In fact, the best analysis I've seen on this is [redacted] three-region model analysis where he compares the look-ahead with the no-look-ahead case and gets an oil price that is several dollars lower in 1990 in the look-ahead case. I believe that it is in the 1990's that this effect will start to make a significant difference in the oil price trajectory.

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Finally, as indicated in Figure 9, policies in the oil importing countries can significantly delay the re-establishment of a sellers market in world oil. And if the policy measures are retained at their peak levels even after oil prices bottom out (probably a good idea) the effect would be even more pronounced. Give me a call if you have any questions on these calculations. I look forward to seeing you (twice) next week.

Best regards.

Sincerely,

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[redacted]  
Enclosures

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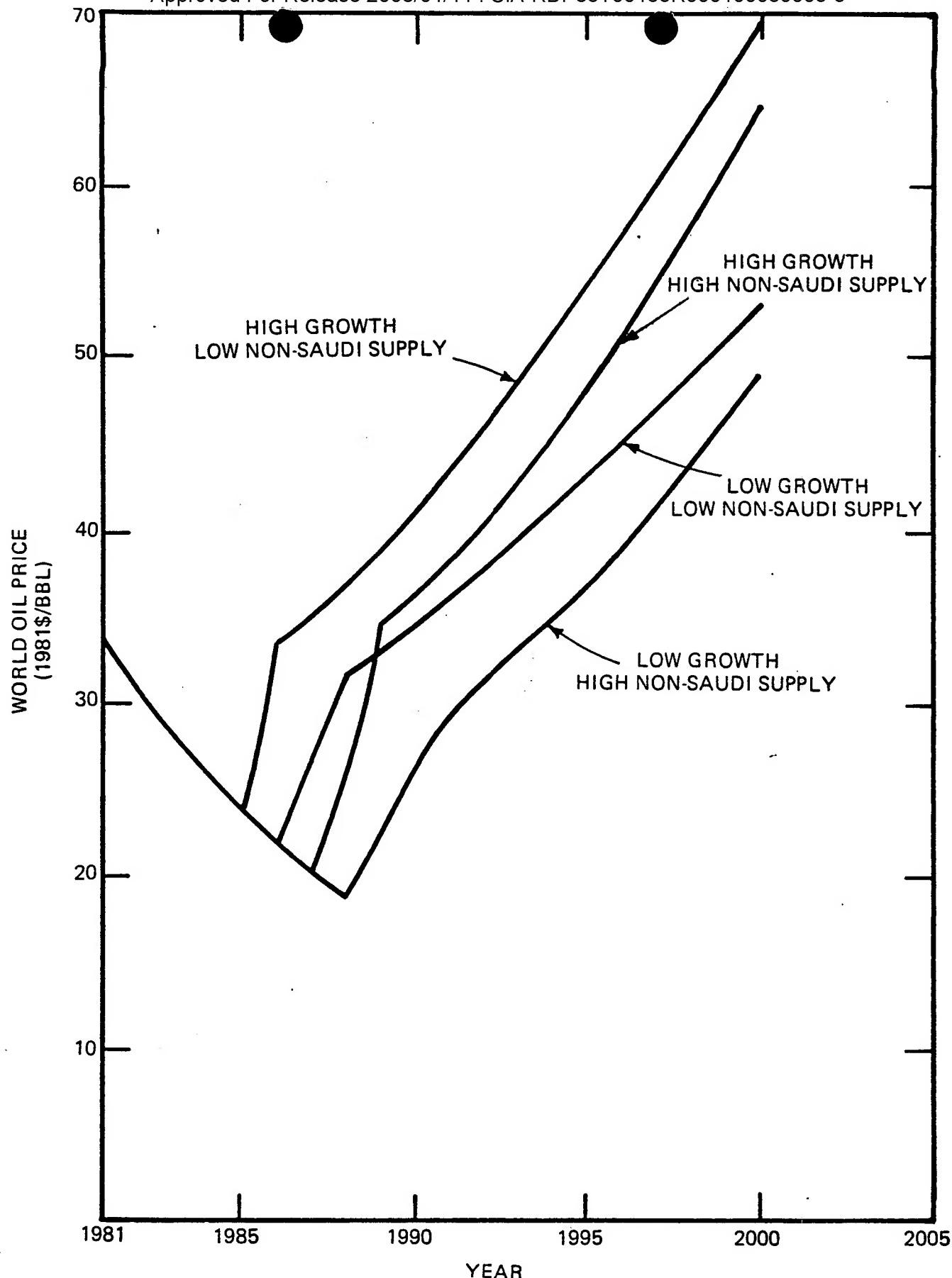


Figure 5 World Oil Price Trajectories Implied by Simple Saudi Pricing Rule in Four Sets of Market Conditions

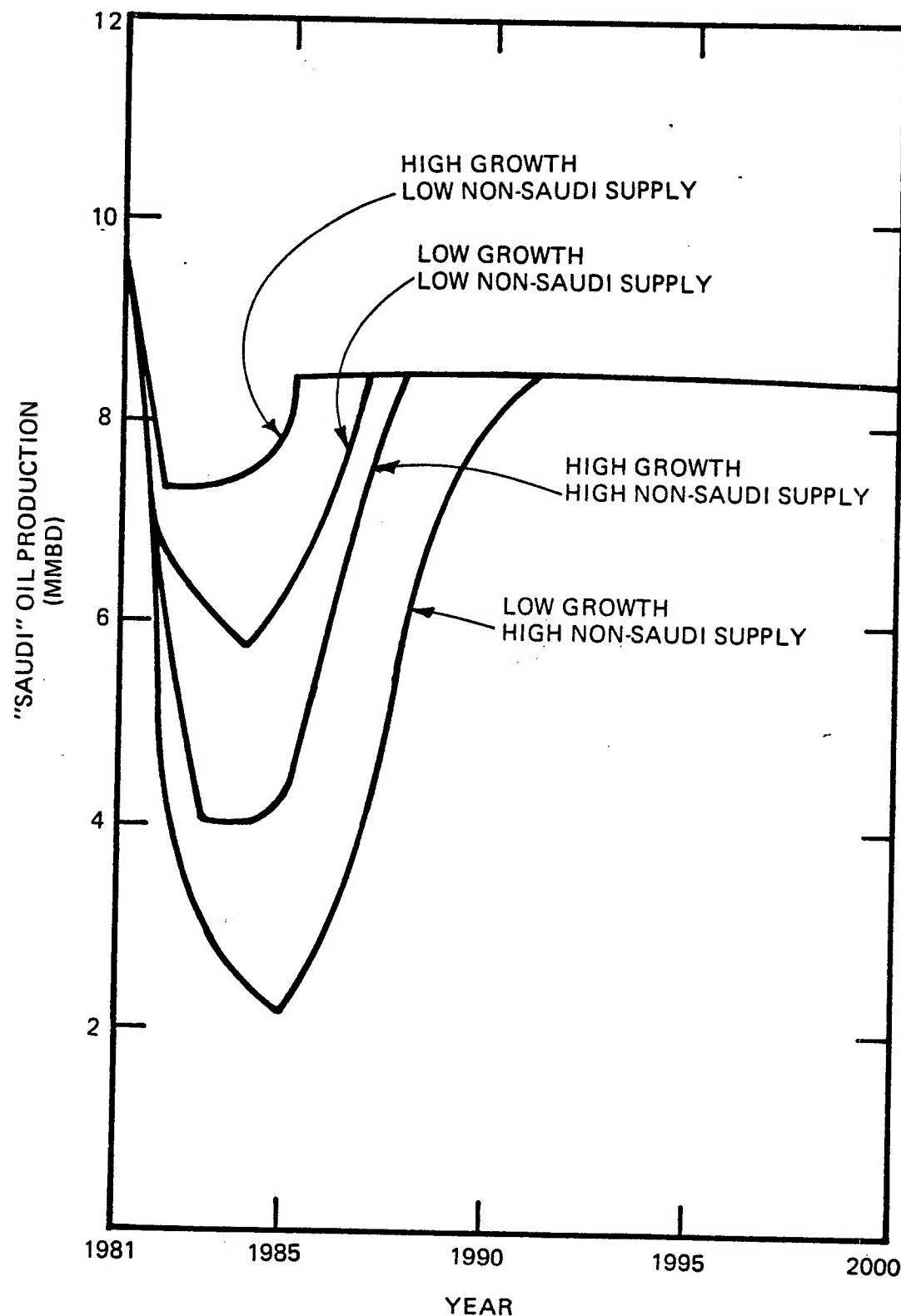
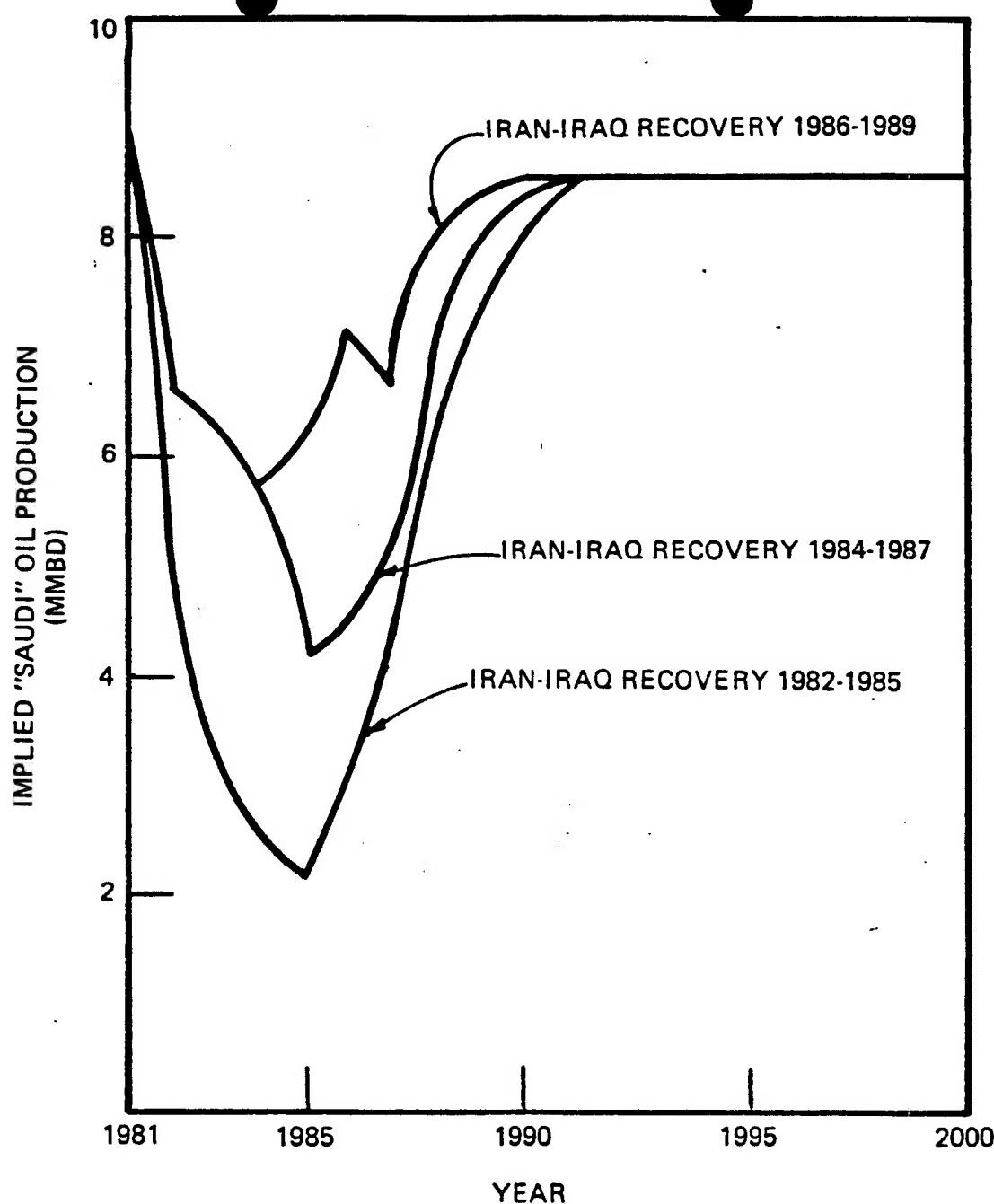
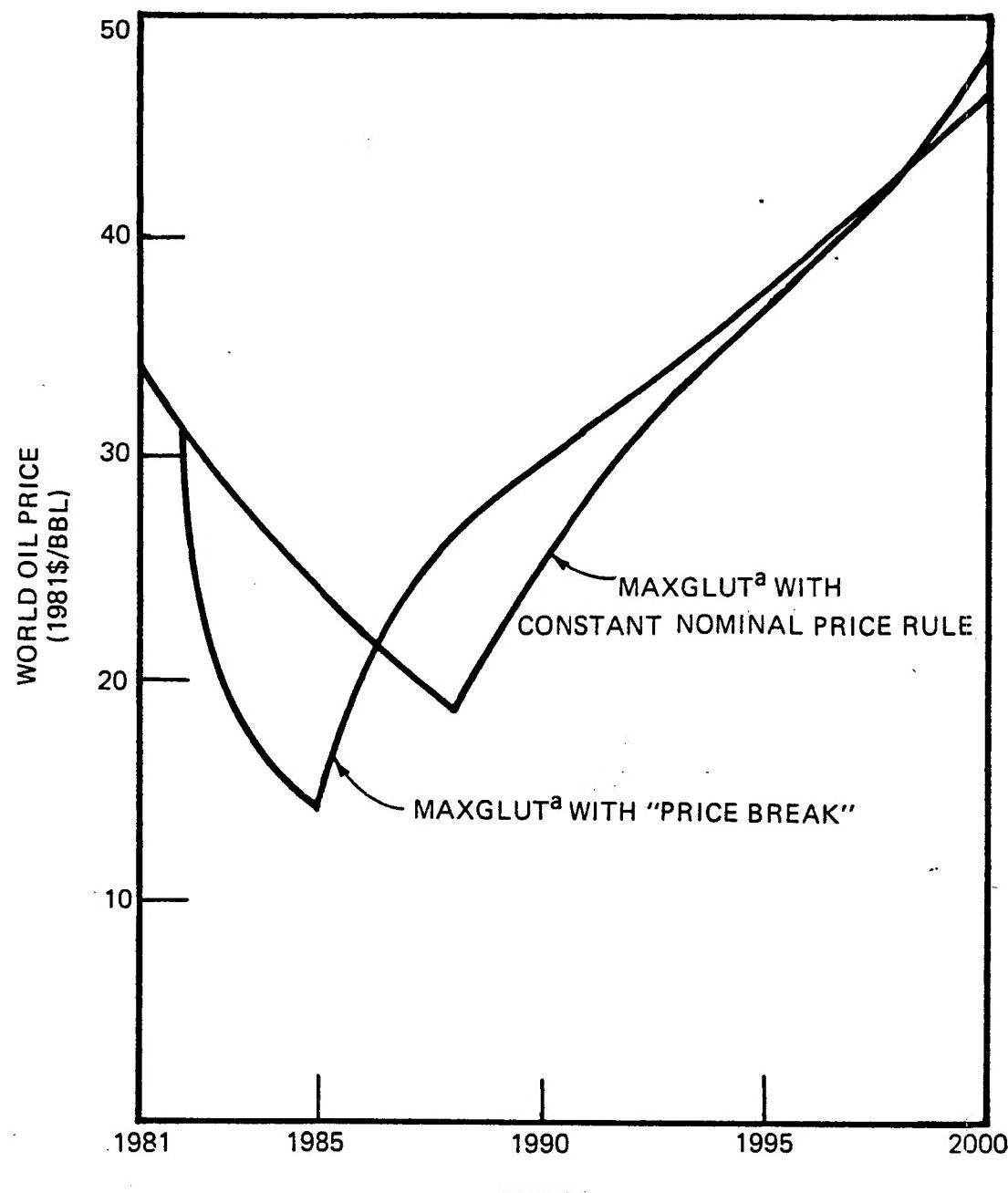


Figure 6 "Saudi" Oil Production Implied by Simple Saudi Pricing Rule in Four Sets of Market Conditions



**Figure 7** "Saudi" Oil Production Implied by Simple Saudi Pricing Rule with Low Growth and Three Alternative Iran-Iraq Recovery Rates



<sup>a</sup>Low growth and high non-Saudi supply

Figure 8 A Potential "Price Break" Scenario

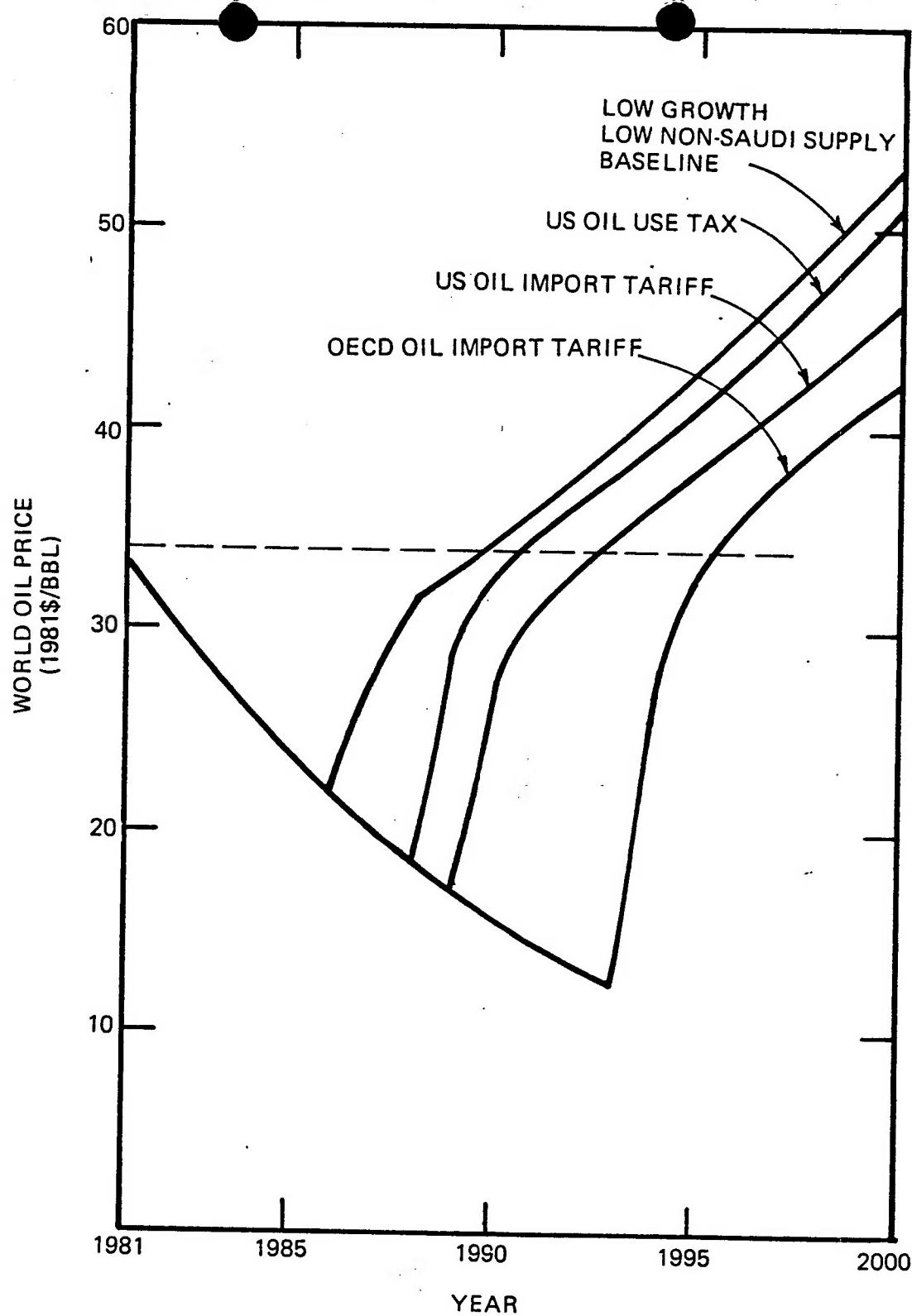
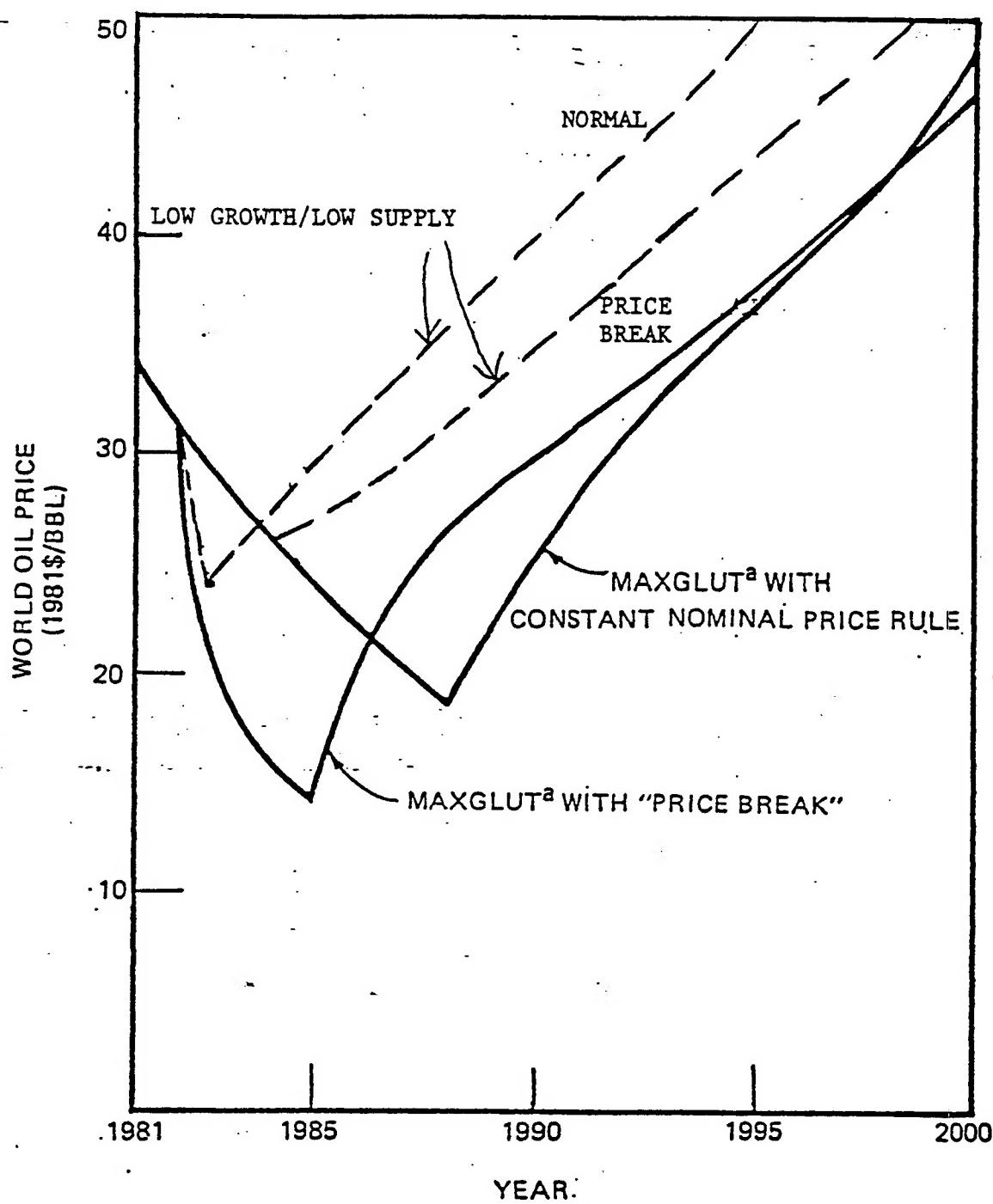


Figure 9 Projected World Oil Prices in the Low Growth, Low Non-Saudi Supply Case with Three Kinds of Oil Taxes

*Xtra "joe"*

<sup>a</sup>Low growth and high non-Saudi supply.

Figure 3 A Potential "Price Break" Scenario